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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,597	12/27/2001	Aleksandra Mojsilovic	909.0045.U1(US)	8791
29683	7590	03/03/2006	EXAMINER	
HARRINGTON & SMITH, LLP			LE, BRIAN Q	
4 RESEARCH DRIVE			ART UNIT	
SHELTON, CT 06484-6212			PAPER NUMBER	
			2621	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,597

Applicant(s)

MOJSILOVIC ET AL.

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 14-24 are rejected under 35 U.S.C. 101 because the claimed limitation “A data processing system comprising a data processor, a graphical user interface and **a memory** that stores a collection of digital images in an image database, said data processor operating in accordance with **a stored program** for determining the semantic meaning of images...” of claim 11 is non-statutory because the terminology “a memory” and “a stored program” alone have no set definition. A statutory product with descriptive material must include a positive recitation of the computer readable medium -- MPEP 2106, case law, USPTO policy, all are founded on this.

Claims not specifically addressed depend from indefinite antecedent claims.

Claim Objections

3. Claim 25 is objected to because these claims are very difficult to understand due to the use of confusing language. One skilled in the art does not understand the limitation “the semantic categories being modeled using **multidimensional scaling and hierarchical clustering** techniques ...” (emphasis added). Appropriate correction is required. The prior art rejection based on the Examiner’s best understanding.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Jain et al. U.S.

Patent No. 5,915,250.

Regarding claim 1, Jain teaches a computer implemented method (FIG. 1A) for determining the semantic meaning of mages, comprising:

deriving a set of perceptual semantic categories (defining and register custom primitives) (abstract) for representing important semantic cues (object's attributes) (abstract) in the human perception of images (column 4, lines 20-25), where each semantic category is modeled through a combination of perceptual features that define the semantics of that category and that discriminate that category from other categories (visual information retrieval system provides modular and framework to define and classify category of object's attributes) (abstract and column 3, lines 60 to column 4, lines 1-10); and

for each semantic category, forming a set of the perceptual features as a complete feature set CFS (feature vector to store each kind of primitives) (column 5, lines 5-20).

Regarding claim 2, Jain teaches a method wherein the perceptual features and their combinations are derived through subjective experiments performed with human observers (column 4, lines 20-31).

For claim 3, Jain further teaches a method further comprising extracting perceptual features from an input image and applying a perceptually-based metric (a similarity scoring system) to determine the semantic category for that image (abstract).

Referring to claim 4, Jain discloses a method comprising processing the input image to compute the CFS (FIG. 1A, element 112); comparing the input image to each semantic category

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through the perceptually-based metric that computes a similarity measure between the features used to describe the semantic category and the corresponding features extracted (abstract) from the input image (rank similarity result) (column 12, lines 50-67); and assigning the input image to the semantic category that corresponds to a highest value of the similarity measure (column 12, lines 65 to column 13, line 3).

For claims 5, Jain also discloses a method further comprising computing features from the CFS for images in an image database (FIG. 1A); and generating a distance measure for characterizing a relationship of a selected image to another image in the image database by applying a perceptually-based similarity metric (column 8, lines 10-27).

For claim 6, Jain shows a method where values of the similarity metric computed for images in the image database are subsequently used to search for similar images in the image database (column 9, lines 50-64).

Regarding claim 7, Jain shows a method where values of the similarity metric computed for images in the image database are subsequently used to organize images in the image database (classifying images base on similarity scoring system) (FIG. 5B, elements 280 and 284).

For claim 8, Jain teaches a method where values of the similarity metric computed for images in the image database are subsequently used to display images in the image database in an organized manner (FIG. 4; FIG. 5B, element 294; and column 11, lines 23-39).

Also to claim 9, Jain further teaches a method further comprising defining a subset of features for the selected image or for an image retrieved from the image database, and using the

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subset of features to refine a search through the image database (searching with specific parameters) (column 4, lines 29-45).

Referring to claim 10, Jain shows a method wherein the image database is located at a remote location and is reachable through a data communications network (FIG. 1B and column 9, lines 10-25).

Also to claim 11, Jain further shows a method wherein the image database is located at a remote location and is reachable through a data communications network, and where the step of characterizing the relationship of the selected image to another image in the image database by applying the perceptually-based similarity metric is accomplished to retrieve an image from the remote image database (FIG. 1B and column 9, lines 10-50).

As for claim 12, Jain also teaches a method wherein the image database is located at a remote location and is reachable through a data communications network, and where the step of characterizing the relationship of the selected image to another image in the image database by applying the perceptually-based similarity metric is accomplished in conjunction with a text-based search algorithm to retrieve a multi-media object from the remote location (direction communication between databases) (column 9, lines 10-50).

Referring to claim 13, Jain discloses a method wherein to assign a particular semantic category to an image all of a set of Required Features must be present in the image, and at least one of a set of Frequently Occurring Features must be present in the image (fixed/universal or default primitives) (column 8, line 60 and column 16, lines 16-25).

For claim 14, please refer back to claims 1-3 for further teachings and explanations. In addition, Jain teaches a data processing system comprising a data processor, a graphical user

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interface and a memory to processes the aforementioned limitations (FIG. 1A and column 9, lines 5-50).

For claims 15-24, please refer back to claims 4-13 respectively for further teachings and explanations.

For claim 25, please refer back to claims 1-4 for further teachings and explanations. In addition, Jain teaches a computer program (column 6, lines 15-25) to processes aforementioned limitation and semantic categories being modeled using multidimensional scaling and hierarchical clustering techniques (different ways of querying and classifying images) (FIG. 1A, elements 106 and 108).

For claims 26 - 27, Jain teaches a computer program where as a result of comparing the input image to images stored in the image database one or more most similar images are identified in the image database (column 12, lines 50-67 and (column 12, lines 65 to column 13, line 3) and display it (FIG. 1B, element 148).

For claim 28, please refer back to claim 14 for further teachings and explanations.

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CONCLUSION


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q. Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 571-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BL

February 24, 2006


BRAN Q. LE
PRIMARY EXAMINER